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| Breakout 2: Tuesday Morning Examining Student Responses | |  |
| 120 minutes | Math Learning Goals   * Participants will gain an understanding of the various representations for one half, which ones are correct, and which ones are misleading or confusing * By looking at student work, participants will recognize and analyze various representations of one half and some of the common misconceptions that are evident * Participants will gain an understanding of the complexity of working with set models in fractions * Participants will gain an awareness of the existence of fractional concepts in other areas of the mathematics curriculum | Materials  \*Copies of Gap Closing Diagnostic  \*Student work from EQAO problem  \*Curriculum Docs  \*Chart paper \*markers |
|  | Individual/Think/Pair/Share 🡪 Analyzing Various Representations for ½  Teachers individually look at the original diagnostic from the Gap Closing. Next, they engage in a think/pair/share to discuss which representations they would like to further discuss since they may cause difficulty for the students. This is followed by a whole group discussion about the chosen representations. |  |
| Minds On… |
| 20 minutes |
|  | Small Group 🡪Analyzing various representations in student work  Participants solve the following EQAO problem in a number of ways, predict and discuss potential student misconceptions, and what may be seen in work of a child who may struggle with the concept of one half.  EQAO tree problem from 2005-06 (*Ryan is given the following problem to solve. “There are 30 maple trees on a farm. Half the trees have been tapped for sap. What is the total number of trees that have been tapped for sap?” Ryan gets an answer of 18 trees. Is his answer correct?*)  Participants look at samples of EQAO solutions and discuss using the following guiding questions.  - What mathematical understanding do we see in the work?  - Do we see any of the misconceptions Marian mentioned in the work?  - What are some of the misconceptions that were not part of the plenary?  - What strategies could be used to help students better understand the concept of fractions?  **Whole Group -> Discussion**  Identify trends in the work. Share strategies that would help students better understand fractions.  **Pair ->Consolidation**  Determine from various scenarios which represent more or less than one half?  Participants can make their own situation and exchange with a partner |  |
| Action! |
| 15 minutes  40 minutes  15 minutes |
|  | Small Group🡪 Making connections with other areas of the curriculum  Using curriculum document, small groups of participants choose a grade K to 4 and find fractional concepts and understandings in a place/strand where it was previously not anticipated. How do different models link to the curriculum?  **Individual -> Reflection:**  For your treasure chest, either   * record how can you use this knowledge to enrich students’ understanding and help them make connections * Reflect on the quote, "*It doesn't matter whether the glass is half-full or half-empty. There is room for more of the liquid treasure."* |  |
| Consolidate Debrief |
| 15 minutes |